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EXAMINER

BOUTAH, ALINA A

ART UNIT PAPER NUMBER

2143

DATE MAILED: 05/19/2004

20

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/522,332

Applicant(s)

LAVIAN ET AL.

Examiner

Alina N Boutah

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7,9-11 and 13-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-11 and 13-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

This action is in response to Applicant's amendment received March 1, 2004. Claim 12 has been cancelled. Claims 1, 2, 4, 5, 7-11, 13, 14, 16, 17, 19-23, 25, 27, 28 and 30-32 have been amended. Claims 1-7 and 9-11, 13-34 are pending in the present application.

### ***Response to Arguments***

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 8-15, 20-26 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,655,081 issued to Bonnell et al (hereby Bonnell).

(Amended) Regarding claim 1, Bonnell teaches a system for managing network resources comprising:

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a network management server configured to execute a network management application which causes the network management server to perform network management instructions including,

sending one or more network commands to one or more network devices connected to the network (figure 2; col. 2, lines 48-51),

receiving one or more status packets from the one or more network devices in response to the one or more network commands (col. 2, lines 48-51), and

performing an analysis of use of network resources on the one or more network devices connected to a network using the one or more status packets (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14),

the network management server further configured to request that a network device load the network management application, the network device being among the one or more network devices (col. 7, lines 14-21); and

a network device configured to download the network management application and execute the network management application which causes the network device to perform the network management instructions including, sending one or more second network commands to one of the one or more network devices (col. 15, line 65- col. 16, line 2),

sending one or more second network commands to one of the one or more network devices (col. 2, lines 48-51),

receiving one or more second status packets from one of the one or more network devices in response to the one or more second network commands (col. 2, lines 48-51),

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performing an analysis of use of network resources on the one or more network devices connected to a network using the one or more second status packets (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14), and

sending results of the analysis to the network management server for use in management of the network (Abstract; col. 7, lines 32-44).

Although Bonnell does not explicitly disclose sending second network commands and receiving second status packets from the one or more network devices, he teaches the network device being able to transmit second requests to at least one agent system. This would have been obvious to one of ordinary skill in the art at the time the invention was made that the process of sending and receiving the second network command and status is similar to that of the first network command and status.

(Amended) Regarding claim 2, Bonnell teaches the system in claim 1 wherein the network management application includes network management instructions compatible with a network management protocol (col. 5, lines 60-67 – col. 6, lines 1-14).

Regarding claim 3, Bonnell teaches the system in claim 2 wherein the network management protocol includes the simple network management protocol (SNMP) (col. 5, lines 60-67 – col. 6, lines 1-14).

(Amended) Regarding claim 9, Bonnell teaches the system in claim 1 further comprising an application server device connected to the network and used to store one or more network

management applications downloadable onto the network device (Abstract; figure 19, col. 8, lines 47-49).

(Amended) Regarding claim 10, Bonnell teaches the system in claim 1 wherein the network management application network management instructions that monitors a network parameter associated with the network and notifies the network management server when the network parameter reaches a threshold level (col. 13, lines 55-62; col. 17, lines 18-20).

(Amended) Regarding claim 11, Bonnell teaches a computer-implemented method of distributing management of network resource on a network to network devices exchanging information over the network, comprising:

executing a network management application through a network management sever to perform network management instructions including an analysis of use of network resources on one or more network devices connected to a network (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14);

receiving a request on a network device among the one or more network devices to execute the network management application including performing an analysis of use of network resources on one or more other network devices connected to the network (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14; col. 16, line 3-5);

receiving the network management application over the network wherein the network management application includes the network management instructions for performing the analysis (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14);

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processing the network management instructions on the network device that requests network parameters from a remote network device, the remote network device being among the one or more other network devices, the network management instructions including (col. 7, lines 14-21; col. 9, lines 61-67 – col. 10, lines 1-10; figure 27b; col. 14, line 50 – col. 15, line 15);

transmitting the request for the network parameter over the network to the remote network (col. 7, lines 14-31); and

receiving the requested network parameter over the network from the remote network device (col. 7, lines 14-21);

processing the network management instructions including performing the analysis on the network device using the network parameter (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14);

and

providing results of the analysis to the network server in response to the request to execute the task (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14).

(Amended) Regarding claim 13, Bonnell teaches the method in claim 11 wherein providing results further comprises notifying the network management server when the network parameter reaches a threshold level (col. 13, lines 55-62; col. 17, lines 18-20).

(Amended) Regarding claim 14, Bonnell teaches the method in claim 11 wherein the network management application includes network management instructions compatible with a network management protocol (col. 5, lines 60-67 – col. 6, lines 1-14).

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Regarding claim 15, Bonnell teaches the method in claim 14 wherein the network management protocol includes the simple network management protocol (SNMP) (col. 5, lines 60-67 – col. 6, lines 1-14).

(Amended) Regarding claim 20, Bonnell teaches the method in claim 11, wherein the processor on the network device executes a network management instruction that analyzes the utilization of network resources on one or more network devices connected to the network (col. 6, lines 61-67 – col. 7, lines 1-14).

(Amended) Regarding claim 21, Bonnell teaches the method in claim 11, further comprising an application server device connected to the network, the application server device being used to store one or more network management applications that are downloadable onto the network device (Abstract; figure 19, col. 8, lines 47-49).

(Amended) Regarding claim 22, Bonnell teaches an apparatus for distributing network management of a network-to-network devices comprising: a network management server configured to execute a network management application which causes the network management server to perform network management instructions including,

sending one or more network commands to one or more network devices connected to a network (figure 2; col. 2, lines 48-51),

receiving one or more status packet from the one or more network devices in response to the one or more network commands (col. 2, lines 48-51), and



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performing an analysis of use of network resources on the one or more network devices connected to a network using the one or more status packets (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14),

the network management server further configured to request that a network device load the network management application, the network device being among the one or more network devices (col. 7, lines 14-21); and

a memory containing instructions when executed cause the processor to receive a request on a network device to execute the network management application that performs the network management instructions,

receive the network management application over the network on the network device wherein the network management application has the instructions for performing the network management instructions including,

requesting network parameters from a remote network device, the remote network device being among the one or more network devices (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14),

transmitting the request for the network parameter over the network to the remote network (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14),

receiving the requested network parameter over the network from the remote network device (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14; col. 6, lines 61-67 – col. 7, lines 1-31; col. 9, lines 61-67 – col. 10, lines 1-10; figure 27b; col. 14, line 50 – col. 15, line 15);

processing the instruction for performing the analysis on the remote network device using the network parameter; and providing results of the analysis to the network management server in response to the request to execute the network management instructions (Abstract; col. 6, lines

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61-67 – col. 7, lines 1-14; col. 6, lines 61-67 – col. 7, lines 1-31; col. 9, lines 61-67 – col. 10, lines 1-10; figure 27b; col. 14, line 50 – col. 15, line 15);

and although Bonnell et al. do not expressly teach a processor, some kind of processor must inherently be part of a network device in order to perform the mentioned task.

(Amended) Regarding claim 23, Bonnell teaches the apparatus of claim 22 wherein the memory contains additional instructions for execution on the processor that continue processing network management instructions on the network device using the network parameter (col. 7, lines 14-21; col. 9, lines 61-67 – col. 10, lines 1-10); and providing results of the analysis in response to the request to execute the task (col. 7, lines 7-14; col. 8, lines 63-67).

(Amended) Regarding claim 24, Bonnell teaches the apparatus of claim 22 wherein the memory contains additional instructions for execution on the processor and providing results of the analysis that further notify the network management server when the network parameter reaches a threshold level (col. 13, lines 55-62; col. 17, lines 18-20).

(Amended) Regarding claim 25, Bonnell teaches the apparatus of claim 22 wherein the processor executes network management instructions compatible with a network management protocol (col. 5, lines 60-67 – col. 6, lines 1-14).

Regarding claim 26, Bonnell et al. teach the apparatus of claim 25 wherein the network management protocol includes the simple network management protocol (SNMP) (col. 5, lines 60-67 – col. 6, lines 1-14).

(Amended) Regarding 31, Bonnell et al. teach an apparatus for distributing network management of a network to network devices exchanging information over the network comprising:

means for executing a network management application through a network management server to perform network management instructions including an analysis of use of network resources on one or more network devices connected to a network (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14);

means for receiving a request on a network device among the one or more other network devices to execute the network management application including performing an analysis of use of network resources on one or more other network devices connected to the network (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14);

means for receiving the network management application at the network device over the network wherein the network management application includes the network management instructions operations for performing the analysis (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14);

means for processing the network management instructions on the network device that requests network parameters from a remote network device, the remote network being among the

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one or more other network devices, the network management instructions including (col. 7, lines 14-21; col. 9, lines 61-67 – col. 10, lines 1-10; figure 27b; col. 14, line 50 – col. 15, line 15);

means for transmitting the request for the network parameter over the network to the remote network (col. 7, lines 14-31);

means for receiving the requested network parameter from the remote network device over the network (col. 7, lines 14-21);

means for processing the network management instructions including performing the analysis on the network device using the network parameter; and means for providing results of the analysis to the network management server in response to the request to execute the task (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14).

(Amended) Regarding claim 32, Bonnell et al. teach a computer program product, for distributing network management of a network to network devices exchanging information over the network, the product comprising program code instructions to cause a processor to:

execute a network management application through a network management server to perform network management instructions including an analysis of use of network resources on one or more network devices connected to a network (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14);

receive a request on a network device among the one or more other network devices to execute the network management application including performing an analysis of use of network resources on one or more other network devices connected to the network (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14);

receive the network management application at the network device over the network wherein the network management application includes the network management instructions operations for performing the analysis (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14);

process the network management instructions on the network device that requests network parameters from a remote network device, the remote network being among the one or more other network devices, the network management instructions including (col. 7, lines 14-21; col. 9, lines 61-67 – col. 10, lines 1-10; figure 27b; col. 14, line 50 – col. 15, line 15);

transmit the request for the network parameter over the network to the remote network (col. 7, lines 14-31);

and receive from the remote network device the requested network parameter over the network (col. 7, lines 14-21);

process the network management instructions including performing the analysis on the network device using the network parameter (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14);

and

provide results of the analysis to the network management server in response to the request to execute the task (Abstract; col. 6, lines 61-67 – col. 7, lines 1-14).

(New) Regarding claims 33 and 34, Bonnell teaches the system in claim 1 and the method in claim 11, wherein the network device performing an analysis of use of network resources on the one or more network devices connected to a network reduces processing load on the network management server and frees up the network management server to perform tasks other than performing an analysis of use of network resources (col. 7, line 22-31).

Claims 4-7, 16-19, and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bonnell in view of *Infrastructure for Advanced Network Management based on Mobile Code* by Susilo et al.

(Amended) Regarding claims 4, 16, and 27, Bonnell fails to teach the system (in claim 1), the method (in claim 11), and the apparatus of (claim 22), respectively, wherein the network management application includes network management instructions compatible with an object-oriented programming language. Susilo et al. teach a use of mobile agents performing tasks for network management wherein the task includes operations compatible with an object-oriented programming language (Abstract; Requirements 1 and 2, page 324, 3<sup>rd</sup> paragraph, and page 325, 1<sup>st</sup> paragraph; Security, the entire page 328). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to enable the task to include operations compatible with an object-oriented programming language because it provides security and portability that are necessary for secure task distribution (Abstract; Security, the entire page 328; Summary, page 332, 1<sup>st</sup> paragraph).

(Amended) Regarding claim 5, the system in claim 1, wherein the network management application includes network management instructions compatible with byte-codes executable on a virtual machine.

(Amended) Regarding claims 5, 17, and 28, Bonnell et al. fail to teach the system (in claim 1), the method (in claim 11), and the apparatus of (claim 22), respectively, wherein the

network management application includes network management instructions compatible with byte-codes executable on a virtual machine (Requirement 1, page 324, 3<sup>rd</sup> paragraph; Requirements 2, page 325, 1<sup>st</sup> paragraph; entire page 326). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to enable the task to include operations compatible with byte-code executable on a virtual machine to allow the implementation of applications that run on many different platforms, thus enhancing the system's robustness (Requirement 1, page 324, 3<sup>rd</sup> paragraph).

Regarding claims 6, 18, and 29, Bonnell et al. fail to teach the system (in claim 5), the method (in claim 19), and the apparatus of (claim 28), respectively, wherein the virtual machine is compatible with the Java Virtual Machine. Susilo et al. teach the virtual machine being compatible with Java Virtual Machine (Requirement 1, page 324, 3<sup>rd</sup> paragraph; Requirements 2, page 325, 1<sup>st</sup> paragraph; entire page 326). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to employ a virtual machine that is compatible with Java Virtual machine because it allows the implementation of applications that run on many different platforms, thus enhancing the system's robustness (Requirement 1, page 324, 3<sup>rd</sup> paragraph).

(Amended) Regarding claims 7, 19, and 30, Bonnell et al. fail to teach the system (in claim 1), the method (in claim 11), and the apparatus of (claim 22), respectively, wherein the network management application includes network management instructions compatible with the Java object-oriented programming language. Susilo et al. teach a use of mobile agents

performing task for network management wherein the task includes operations compatible with the Java object-oriented programming language (Abstract; Requirements 1 and 2, page 324, 3<sup>rd</sup> paragraph, and page 325, 1<sup>st</sup> paragraph; Security, the entire page 328). At the time the invention was made, it would have been obvious to one of ordinary skill in the art to enable the task to include operations compatible with Java object-oriented programming language because Java provides security and portability that are necessary for secure task distribution (Abstract; Security, the entire page 328; Summary, page 332, 1<sup>st</sup> paragraph).

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alina N Boutah whose telephone number is (703) 305-5104. The examiner can normally be reached on Monday-Thursday (9:00 am-7:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (703) 308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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